P2U3-0022-04ENZ0

ETERNUS

Disk storage systems

ETERNUSmgr

Install Guide

for Linux

FUJITSU

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Preface

This installation guide explains how to install the "ETERNUSmgr for Linux" storage system management software on an ETERNUS DX400 series, ETERNUS DX8000 series, ETERNUS2000, ETERNUS4000, ETERNUS8000, ETERNUS3000, or ETERNUS6000 (hereafter referred to as an "ETERNUS Disk storage system" or "device").
Follow the instructions in this guide to install "ETERNUSmgr for Linux".

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Content and Structure

This guide consists of the following two chapters and an appendix.

- Chapter 1 Installing ETERNUSmgr

  This chapter describes how to install ETERNUSmgr.

- Chapter 2 Uninstalling ETERNUSmgr

  This chapter describes how to uninstall ETERNUSmgr.

An appendix describes the "How to Set Up the Web Server", using the "apache" Web server as a typical example.

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Chapter 1 Installing ETERNUSmgr

This chapter describes how to install ETERNUSmgr.

1.1 ETERNUSmgr CD-ROM

The files distributed on the ETERNUSmgr CD-ROM are listed below.

- ./README_ja.TXT
- ./README_en.TXT
- ./bin/win/
- ./bin/sol/ETERNUSV20L30.PKG
- ./bin/hp/ETERNUSV20L30.HP
- ./bin/aix/ETERNUSV20L30.AIX
- ./bin/linux/FJSVgrmgr-V20L30-1.i386.rpm
- ./doc/install/win/
- ./doc/install/sol/
- ./doc/install/hp/
- ./doc/install/aix/
- ./doc/install/linux/
- ./doc/share/
- ./doc/DX8000/
- ./doc/E2000/
- ./doc/E3000/
- ./doc/E3000M50/
- ./doc/E4000M80/
- ./doc/E6000/
- ./doc/E8000M700/
- ./doc/E8000M800/

Each file and directory is briefly described below:

./README_ja.TXT

This file contains the CD-ROM list. (Japanese version)

./README_en.TXT

This file contains the CD-ROM list. (English version)

./bin/win/

This folder contains the files needed to install ETERNUSmgr for Windows. Use the "SETUP.EXE" found in this folder to install these files.

./bin/sol/ETERNUSV20L30.PKG

This is the main ETERNUSmgr program for Solaris. It is the installation package for the "pkgadd" format.

./bin/hp/ETERNUSV20L30.HP

This is the main ETERNUSmgr program for HP-UX. This file is a compressed archive of the various files needed to run ETERNUSmgr. Unpack this file and use the "stxinst" installer to install these files.

./bin/aix/ETERNUSV20L3\30.AIX

This is the main ETERNUSmgr program for AIX. This file is a compressed archive of the various files needed to run ETERNUSmgr. Unpack this file and use the "stxinst" installer to install these files.

./bin/linux/eFJSVgrmgr-V20L30-1.i386.rpm

This is the main ETERNUSmgr program for Linux. It is the installation package for the "rpm" format.

./doc/

This directory contains various manuals. Files with "EN" in their name are English version manuals, while files without "EN" in their name are Japanese version manuals.

./doc/install/win/

This directory contains the "ETERNUS Disk storage systems ETERNUSmgr Install Guide for Windows®" pdf files. These pdf files describe how to install ETERNUSmgr for Windows.

./doc/install/sol/

This directory contains the "ETERNUS Disk storage systems ETERNUSmgr Install Guide for Solaris™ Operating System" pdf files. These pdf files describe how to install ETERNUSmgr for Solaris.

./doc/install/hp/

This directory contains the "ETERNUS Disk storage systems ETERNUSmgr Install Guide for HP-UX" pdf files. These pdf files describe how to install ETERNUSmgr for HP-UX.

./doc/install/aix/

This directory contains the "ETERNUS Disk storage systems ETERNUSmgr Install Guide for AIX" pdf files. These pdf files describe how to install ETERNUSmgr for AIX.

./doc/install/linux/

This directory contains the "ETERNUS Disk storage systems ETERNUSmgr Install Guide for Linux" pdf files. These pdf files describe how to install ETERNUSmgr for Linux.

./doc/share/

This directory contains the "ETERNUSmgr User Guide -Introduction-" pdf files. These pdf files describe ETERNUSmgr's monitoring and e-mail notification functions.

./doc/DX8000/

This directory contains the "ETERNUS DX400/DX8000 series ETERNUSmgr User Guide -Settings/Maintenance-" pdf files. These pdf files show how to set up an ETERNUS DX400 series or ETERNUS DX8000 series configuration, and describe how to modify its settings and perform maintenance.

./doc/E2000/

This directory contains the "ETERNUS2000 ETERNUSmgr User Guide -Settings/Maintenance- for models 100 and 200" pdf files. These pdf files show how to set up an ETERNUS2000 model 100 or 200 configuration, and describe how to modify settings and perform maintenance.

./doc/E3000/

This directory contains the "ETERNUS3000 ETERNUSmgr User Guide -Settings/Maintenance- for models 80, 100, 200, 200M, 300, 300M, 400, 400M, 500, 500M, 600, 600M, 700, and 700M" pdf files. These pdf files show how to set up an ETERNUS3000 model 80, 100, 200, 200M, 300, 300M, 400, 400M, 500, 500M, 600, 600M, 700, or 700M configuration, and describe how to modify settings and perform maintenance.

./doc/E3000M50/

This directory contains the "ETERNUS3000 ETERNUSmgr User Guide -Settings/Maintenance- for model 50" pdf files. These pdf files show how to set up an ETERNUS3000 model 50 configuration, and describe how to modify settings and perform maintenance.

./doc/E4000M80/

This directory contains the "ETERNUS4000 ETERNUSmgr User Guide -Settings/Maintenance- for models 80 and 100" pdf files. These pdf files show how to set up an ETERNUS4000 model 80 or 100 configuration, and describe how to modify settings and perform maintenance.

./doc/E6000/

This directory contains the "ETERNUS6000 ETERNUSmgr User Guide -Settings/Maintenance-" pdf files. These pdf files show how to set up an ETERNUS6000 configuration, and describe how to modify settings and perform maintenance.

./doc/E8000M700/

This directory contains the "ETERNUS8000, ETERNUS4000 ETERNUSmgr User Guide -Settings/Maintenance-" pdf files. These pdf files show how to set up an ETERNUS8000 model 700, 900, 1100, or 2100, and ETERNUS4000 model 300 or 500 configuration, and describe how to modify settings and perform maintenance.

./doc/E8000M800/

This directory contains the "ETERNUS8000, ETERNUS4000 ETERNUSmgr User Guide -Settings/Maintenance-" pdf files. These pdf files show how to set up an ETERNUS8000 model 800, 1200, or 2200, and ETERNUS4000 model 400 or 600 configuration, and describe how to modify settings and perform maintenance.

ETERNUSmgr software, "ETERNUSmgr Install Guide", and/or "ETERNUSmgr User Guide" may have been revised. The latest edition of each is available from the following site, and may be downloaded as necessary.

- ETERNUSmgr software
  http://www.fujitsu.com/global/support/computing/storage/system/
- "ETERNUSmgr Install Guide" and "ETERNUSmgr User Guide"
  http://www.fujitsu.com/global/support/computing/storage/system/

1.2 Installation Outline

The following are two stages in ETERNUSmgr installation.

(1) Installation by rpm command

(2) ETERNUSmgr environment setup

Refer to "1.6 Procedure" (page 11) for the installation procedures.

Check the following before installation.

- The IP address (provided by customer) of the ETERNUS Disk storage system
- The e-mail address of the system administrator (when using the e-mail notification function)
- The directory name on the Web server for the ETERNUSmgr menu file
- The URL for viewing the directory name on the above server using a browser

After installation, refer to the "ETERNUSmgr User Guide -Introduction-" to perform the necessary settings.
For details about monitoring multiple target devices, refer to the "ETERNUSmgr User Guide -Introduction-".

1.3 Supported Environment

- Supported Operating Systems

- Red Hat Enterprise Linux AS (v. 3 for x86)
- Red Hat Enterprise Linux ES (v. 3 for x86)
- Red Hat Enterprise Linux AS (v. 4 for x86)
- Red Hat Enterprise Linux ES (v. 4 for x86)
- Red Hat Enterprise Linux AS (v. 4 for EM64T)
- Red Hat Enterprise Linux ES (v. 4 for EM64T)
- Red Hat Enterprise Linux 5 (for x86)
- Red Hat Enterprise Linux 5 (for Intel64)
- SUSE Linux Enterprise Server 9 for x86
- SUSE Linux Enterprise Server 9 for EM64T
- SUSE Linux Enterprise Server 10 for x86
- SUSE Linux Enterprise Server 10 for EM64T

Caution

ETERNUSmgr is not dependant on the kernel version.
Red Hat Enterprise Linux AS (v. 3 for Itanium), Red Hat Enterprise Linux AS (v.4 for Itanium), Red Hat Enterprise Linux 5 (for Intel Itanium), SUSE Linux Enterprise Server 9 for Itanium Processor Family, and SUSE Linux Enterprise Server 10 for Itanium Processor Family are not supported.

- Supported Models

  Refer to the specifications of each ETERNUS Disk storage system.

1.4 Required Hardware/Software

The following hardware/software is required in order to use "ETERNUSmgr".

- An Industry standard server with a Web server and Sendmail server installed
  - IA-64 is not supported.
  - Operation of ETERNUSmgr using Linux versions/distributions not described in "• Supported Operating Systems" in "1.3 Supported Environment" (page 8) is not guaranteed.
  - The Web server must be installed before installing ETERNUSmgr.
  - Not restricted to any specific Web server. However, the Web server must have the capability to display the HTML format log file list. Therefore, the Web server that will be used must have the capacity to display the appropriate directories list.
  - Sendmail is included with the Linux distribution.
- A client machine with the following software:
  - For ETERNUS2000, use:

Software type	Software name	Remarks
Web Browser	• Microsoft® Internet Explorer 6.0 or later • Mozilla Firefox™ 1.5.0.10 or later • Netscape 7.1 or later (Windows® environment)	Any of these web browser may be used.
Java Runtime Environment	• Java Runtime Environment 5.0 Update 11 or later • Java Runtime Environment 6.0 Update 3 or later	Either version may be used.

  - For ETERNUS GR series and ETERNUS3000 model 50, use:

Software type	Software name	Remarks
Web Browser	• Microsoft® Internet Explorer 5.5 + Service Pack2 or later • Netscape Communicator 4.5 or later	Either web browsers may be used.

  - For ETERNUS3000 (except model 50), and ETERNUS4000 models 80 and 100, use:

Software type	Software name	Remarks
Web Browser	• Microsoft® Internet Explorer 6.0 + Service Pack1 or later • Netscape 6.0 or later (Windows® environment)	Either web browsers may be used.

- For ETERNUS DX400 series, ETERNUS DX8000 series, ETERNUS4000 models 300, 400, 500, and 600, and ETERNUS8000, use:

Software type	Software name	Remarks
Web Browser	• Microsoft® Internet Explorer 6.0 + Service Pack2 • Microsoft® Internet Explorer 7.0 • Netscape 6.0 or later (Windows® environment)	Any of these web browser may be used.

- For ETERNUS6000, use:

Software type	Software name	Remarks
Web Browser	• Microsoft® Internet Explorer 6.0 or later • Netscape 6.0 or later (Windows® environment)	Either web browsers may be used.

When a Web browser other than the ones listed above or an older version Web browser is used, the screen display may be abnormal.

1.5 Installation Notes

1.5.1 Web and Mail Server Installation and Setup

To install the Web server and mail server, follow the procedures appropriate to the given software.

For the Web server, setup the following two public directories.

- ETERNUSmgr Top Menu Directory
- ETERNUSmgr Alarm History Files Directory

The Web server must be set to allow the contents of the Alarm History Files Directory to be displayed. Note also that in the setup file (default filename "STXPOLL_1.INI") the HTML_ALARMFILE_PATH parameter must be set to the Alarm History Files Directory.

Caution

The alarm history files must be saved in a directory immediately under the directory in which the ETERNUSmgr Top Menu is installed.

See "ETERNUSmgr User Guide -Introduction-" for the details of the setup file.

1.5.2 Web Directory and Web Directory Files

Files in the Web directory created in the installation directory are ETERNUSmgr screen files (top menu files). Copy the edited top menu ("menu.htm") and other related files to an appropriate directory on the Web server containing the menu.
Note that the files need not be copied when the directory specified at installation is used and changed as the location for the top menu, however if the menu is to be edited the top menu should be saved under another name.

1.5.3 Editing the Top Menu File

As the ETERNUSmgr changes the content of the top menu ("menu.htm") in accordance with the device's status at ETERNUSmgr start-up, do not overwrite or open the top menu with an editor during ETERNUSmgr start-up. Always terminate ETERNUSmgr before making any changes to the top menu.

1.5.4 ETERNUSmgr Re-installation

If ETERNUSmgr or GRmgr is already installed in a server where you want to install ETERNUSmgr, uninstall the previous ETERNUSmgr or GRmgr before installing ETERNUSmgr. ETERNUSmgr has compatibility with GRmgr V10L30 or later regarding logical operation, data files, log files, etc. (it is not compatible with GRmgr V10L20 or earlier). ETERNUSmgr can use setting file of GRmgr V10L30 or later. Before uninstalling GRmgr, make a backup of any setting or log files, if necessary. For details, refer to "ETERNUSmgr compatibility with GRmgr" in "Chapter 5 Cautions" in "ETERNUSmgr User Guide -Introduction-".

1.6 Procedure

This describes how to install ETERNUSmgr.

Before installing ETERNUSmgr, use the following format to check that ETERNUSmgr is not installed. If ETERNUSmgr is already installed, uninstall it, and then install.

```
Format:rpm -qi FJSVgrmgr
```

1.6.1 Installation by rpm Command

Execute "./bin/linux/FJSVgrmgr-VxxLxx-1.i386rpm" (which is an install package included with the CD-ROM), by abiding by the following format. Installation must be conducted by the superuser. If the installation directory is not specified, ETERNUSmgr will be installed in "/opt/FJSVgrmgr/" as default. Refer to the entering "rpm" command in step 2 in the following, for installation directory specification procedures.

Format:rpm -ivh FJSVgrmgr-V20L30-1.i386.rpm

* VxxLxx refers to the version/level number.

Procedure

1 Login as the superuser, and go to the directory where the install package is located.

2 Follow the above format and enter the "rpm" command.

- When installing ETERNUSmgr V20L30 to the "/opt/FJSVgrmgr/" default directory

(Example) `# rpm -ivh FJSVgrmgr-V20L30-1.i386.rpm`

When specifying the installation directory, use the following example as a reference to execute the "rpm" command.

Format:rpm -ivh --prefix "installation directory" FJSVgrmgr-V20L30-1.i386.rpm

- When installing ETERNUSmgr V20L30 to the "/usr/share/" directory

(Example) `# rpm -ivh --prefix /usr/share FJSVgrmgr-V20L30-1.i386.rpm`

3 This complete the installation with the "rpm" command.
If installation completed normally, the following message will appear:

(message displayed)

```
# Install of FJSVgrmgr completed.
```

End of procedure

Setup the environment settings by executing the ETERNUSmgr environment setup script. ETERNUSmgr cannot activate normally if the environment is not set.

1.6.2 ETERNUSmgr Environment Setup

After installation by "rpm" is complete, a file for ETERNUSmgr environment setup script with the name "stxpollset.sh," will be created in the installation directory (default is "/opt/FJSVgrmgr").
Transfer "stxpollset.sh" to the installation directory, and then execute.
Executing "stxpollset.sh" must be conducted by the superuser.
From here on, input each type of parameter by interacting with ETERNUSmgr environment setup script "stxpollset.sh".

Procedure

1 Select the type of target device.

The character string for the selected device is assigned to the "TARGET_TYPE" parameter in the setup file ("STXPOLL_1.INI"), while a device type flag (1=ETERNUS3000/GR710/GR720/GR730, 2=ETERNUS6000/GR740/GR820/GR840, 4=ETERNUS DX400 series/ETERNUS DX8000 series/ETERNUS2000/ETERNUS4000/ETERNUS8000) is assigned to the "TARGET_FLAG" parameter.
For an ETERNUS DX410/DX440, select "1" (=ETERNUS DX400 series). For an ETERNUS DX8100/DX8400/DX8700, select "2" (=ETERNUS DX8000 series).

(message displayed)

```
# Select target type.
# 1=ETERNUS DX400 2=ETERNUS DX8000 3=ETERNUS2000 4=ETERNUS3000
5=ETERNUS4000 6=ETERNUS6000 7=ETERNUS8000 8=GR710 9=GR720 10=GR730
11=GR740 12=GR820 13=GR840
([1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13] default: 1=ETERNUS DX400)
```

2 Enter the URL.

Enter the URL for the directory in which ETERNUSmgr Top Menu is located. (The default setting is "/opt/FJSVgrmgr/www".) (This URL is assigned to the ETERNUSmgr Top Menu directory by the Web server settings.)

Enter the URL starting with "http://" and finishing with the alias name.

(message displayed)

```
# Input your www server URL.
# (default: http://)
```

3 Enter the Target Address.

a Enter the Target Address allocated to the device.
The value entered here is set to the "TARGET_ADDR" parameter of the "STXPOLL_1.INI" file. Specify the IP address of the SVP when using SVP with the ETERNUS6000.

(message displayed)

```
# Input target address (TARGET_ADDR).
# (default: 0.0.0.0)
```

4 Set the ETERNUSmgr e-mail notification function.

When the ETERNUSmgr e-mail notification function is to be used, set as follows:

a Enter the ETERNUSmgr Admin Mail Address.
ETERNUSmgr will send messages to the mail address entered here when a change of status occurs in the device.
The value entered here is set to the "ADMIN_MAIL" parameter in the "STXPOLL_1.INI" file.

(message displayed)

```
# Input ETERNUSmgr administrator mail address (ADMIN_MAIL).
# (default: root@domain-name)
```

Note the following if you do not use the ETERNUSmgr e-mail notification function.

Caution

The "ADMIN_MAIL" parameter may be omitted in ETERNUSmgr in order to disable the e-mail notification function. Note that the e-mail notification function cannot be disabled by omitting the e-mail address at installation, and the setup file must therefore be edited to disable "ADMIN_MAIL". See "Chapter 2 Setup" in the "ETERNUSmgr User Guide -Introduction-" for details of editing the setup file.

If the mail settings are correct, ETERNUSmgr sends an e-mail which includes the following message to the administrator when ETERNUSmgr is started.

```
"ETERNUSmgr VxxLxx - HTTP Polling engine was started."
```

*VxxLxx refers to the version/level number.

If no e-mail is sent to the administrator when ETERNUSmgr is started, the mail settings are incorrect. Check whether the contents of the setup file are correct, and if there are any problems in the transmission link.
Refer to "Chapter 3 Startup and Shutdown" in "ETERNUSmgr User Guide -Introduction-" for details of starting ETERNUSmgr.

5 Check setup.

- If the settings are correct
  Enter "y" and press the [Enter] key.
- If the settings are incorrect
  Enter "n" and press the [Enter] key.
  → This will return you to Step 1.
- To terminate installation
  Press the [Ctrl] + [C] keys simultaneously.
  → Installation will be terminated.

(message displayed)

```
# WWW Server URL= "http://domain-name/ETERNUSmgr"
# Target Type= "ETERNUS3000"
# Target Address= "0.0.0.0"
# ETERNUSmgr Admin Mail Address= "root@grmacm2"
#
# Configuration OK?
```

6 ETERNUSmgr environment setup is complete.
If environment setup has ended normally, the following message will be displayed.

(message displayed)

```
Setup of FJSVgrmgr succeed.
```

End of procedure

Follow the procedure above to copy the necessary files to the specified installation directory. See "Chapter 2 Setup" in the "ETERNUSmgr User Guide -Introduction-" for the necessary setups of the ETERNUSmgr operation.

- Target Type

```
# Polling Server Type
```

TARGET_TYPE = Target Type specified in Step 1 (Name)

- Target Flag

  `# Polling Server Flag`
  TARGET_FLAG = Device type flag specified in Step 1 (1 = ETERNUS3000, GR710, GR720, GR730, 2 = ETERNUS6000, GR740, GR820, GR840, 4 = ETERNUS2000, ETERNUS4000, ETERNUS8000, ETERNUS DX400 series, ETERNUS DX8000 series)
  If "1=ETERNUS DX400 series" was selected in Step 1, then "TARGET_TYPE=ETERNUS DX400".
  If "2=ETERNUS DX8000 series" was selected in Step 1, then "TARGET_TYPE=ETERNUS DX8000".
  The target type name can be modified post-installation.

- Target Address

  `# Polling Server Address`
  TARGET_ADDR = Target Address specified in Step 3

- Admin Mail Address

  `# Admin Mail Address`
  ADMIN_MAIL = Mail address specified in Step 4

- Alarm History Index URL

  `# HTTP Server URL`
  HTML_ALARMFILE_URL = URL specified in Step 2 followed by "/html_1"

- Log Files Directory

  `# Log File Saved PATH`
  LOGFILE_PATH = Installation directory followed by "/log_1"

The parameters of the setup file can be edited after executing the environment setup script.

The settings to operate ETERNUSmgr by the Web are contained in ETERNUSmgr Top Menu directory (default is "/opt/FJSVgrmgr/www"). For information on how to perform these settings, refer to the Web server manual for further details.

The following files are stored in the installation directory, after installation by rpm and ETERNUSmgr environment setup.

- stxpolld
- stxchk
- _STXPOLL.INI
- STXPOLL_1.INI
- stxpoll
- stxpollset.sh
- www/index.htm
- www/menu.htm
- www/fujitsu.gif, www/eternus.gif

The following explains each file and directory:

stxpolld

ETERNUSmgr daemon.

stxchk

Checks the ETERNUSmgr setup file.

_STXPOLL.INI, STXPOLL_1.INI

STXPOLL_1.INI is a setup file of ETERNUSmgr.
It is created by executing the environment setup script.
If necessary, a text editor such as Notepad, etc. can be used to edit these settings.
_STXPOLL.INI file is a template file.

Caution

Refer to the "ETERNUSmgr User Guide -Introduction-" when editing these setup files. Edit only parameters described in the guide. Do not delete comments or blank lines in the setup files during installation, and do not add anything other than parameters. Failure to follow these instructions may hinder performance and cause problems during future upgrades.

The following format should be used for the file names.

```
Format:STX~.INI
```

If a file name is in a format other than specified above, ETERNUSmgr will not be able to find the file. The only place the setup file can be saved is the installation directory. If saved to another directory, the ETERNUSmgr cannot recognize where the setup files are saved.

Caution

The "STX~.INI" file name format must never be given to non-setup files in the installation directory since, whether they are setup files or not, ETERNUSmgr will attempt to read all such "STX~.INI" files, with unforeseeable and potentially fatal results. If you want to make backup files, save them with a different file name format, or save them outside of the installation directory to prevent ETERNUSmgr from attempting to use them.
ETERNUSmgr allows multiple setup files to be stored in the installation directory, so error monitoring can be carried out for the specified devices using the respective files. However, multiple monitoring settings cannot be made for one device.
If multiple setup files for the same device are detected, a warning message will appear and ETERNUSmgr will not start up. For further details, refer to "2.5 Monitoring Multiple Target Devices" in the "ETERNUSmgr User Guide -Introduction-".

stxpoll

Execution control script for starting up or stopping the ETERNUSmgr.

stxpollset.sh

Shell script to conduct environment setup after installation by rpm. Creates the ETERNUSmgr setup file "STXPOLL_1.INI". "stxpollset.sh" can be executed many times, but if it is executed when "STXPOLL_1.INT" already exists, the setup file will be overwritten, so caution is advised. If "stxpollset.sh" needs to be executed a second time, first backup the ETERNUSmgr setup file, and then execute.

www/index.htm

This file contains the initial screen. After 5 seconds, it automatically jumps to the ETERNUSmgr Top Menu.
To use this file, copy it to a directory under the Web server where the top menu is stored.
During installation, there is no need to copy this file to the specified directory under the top menu if the default directory is used.

www/menu.htm

This file contains ETERNUSmgr Top Menu.
To use this file, copy it to a directory under the Web server where the top menu is stored.
During installation, there is no need to copy this file to the specified directory under the top menu if the default directory is used. In this case, make a backup of this file ("menu.htm") and save it under a different name.

www/fujitsu.gif, www/eternus.gif

These are the images used by the ETERNUSmgr screens.
To use them, copy them to a directory under the Web server where the top menu is stored.
During installation, there is no need to copy these files to the specified directory under the top menu.

setup/

The directory storing the file that the environment setup script uses for environment setup of ETERNUSmgr.

Caution

- The "www/index.htm," "www/menu.htm," "www/fujitsu.gif" and "www/eternus.gif" files must be copied to the same directory under the Web server where ETERNUSmgr Top Menu is stored.
- Always perform the copy operation stated above when ETERNUSmgr is in a stopped state. In addition, if the copy destination of files "www/index.htm," "www/menu.htm," "www/fujitsu.gif" and "www/eternus.gif" is different from the location at installation, make sure to copy them to the same directory, edit all the setup files ("STX~.INI"), and specify the copy destination for "HMTL_ALARMFILE_PATH". Also, set the link to the alarm file for each device described under "Show hardware error detect log list" in the top menu ("menu.htm") to be the same as the setup file's "HTML_ ALARMFILE_PATH".

See "ETERNUSmgr User Guide -Introduction-" for the procedures for editing individual files.

ETERNUS

1.7 Daemon Registration

This section describes how to register ETERNUSmgr daemon. The location and procedure to register the daemon may vary depending on the server settings (registration locations vary with the run level).
Consult with the server administrator to register the daemon.

1. Login as superuser.
2. Copy the execution control script to /etc/init.d/ directory.

```
# cp /opt/FJSVgrmgr/stxpoll /etc/init.d/
```

3. Create the link to the appropriate rc*.d directory.

```
# ln -s /etc/init.d/stxpoll /etc/rc5.d/Snnstxpoll
```
(*nn* is a number)

"*nn*" in S*nn*stxpoll indicates the order of priority. Set any order of priority. Consult with the server administrator for setting priority.

(Example)
```
# ln -s /etc/init.d/stxpoll /etc/rc5.d/S98stxpoll
```

The ETERNUSmgr will be automatically started as a daemon from the next server startup. Make sure that ETERNUSmgr has begun communication with the device by checking the log file after server startup.

Chapter 2 Uninstalling ETERNUSmgr

This chapter describes how to uninstall ETERNUSmgr.

Always terminate ETERNUSmgr before uninstalling.
For details of terminating ETERNUSmgr, refer to "Chapter 3 Startup and Shutdown" in the "ETERNUSmgr User Guide -Introduction-."

Use the "rpm" command to uninstall.

Format: rpm -e FJSVgrmgr

Procedure

1 Log in as the superuser.

2 Follow the above format and enter the "rpm" command.

```
# rpm -e FJSVgrmgr
```

3 This completes the uninstall.
If uninstall has ended normally, the following message will be displayed.

(message displayed)

```
# Uninstall of FJSVgrmgr completed.
```

End of procedure

When ETERNUSmgr is registered as a daemon, ensure that the created links and copied execution control script are also deleted.

Before uninstalling, save the setup file ("STX~.INI") in the ETERNUSmgr installation directory as necessary. The setup file contains the device IP address and administrator's e-mail address etc., and may be useful as reference when installing ETERNUSmgr again. The log file and Alarm history files generated when ETERNUSmgr is started contain a cumulative history of the operating status for the ETERNUSmgr and the device, and should be saved as necessary.
Uninstall deletes files that have been installed, but does not delete some files and directory.

The following are the files and directory that are not deleted.

- ETERNUSmgr setup file "STX~.INI"
- Log files of each type created by ETERNUSmgr
- Directories created by ETERNUSmgr

Files and directories are required to be deleted manually.

(When ETERNUSmgr installation directory is "/opt/FJSVgrmgr")

```
# rm -r /opt/FJSVgrmgr
```

After uninstalling ETERNUSmgr, verify prior to the new installation that the directory does not exist, or that the directory does not contain files or directories, before reinstalling in the same

directory. If installed again while previous ETERNUSmgr files exist, the installation may not be completed, or may not operate correctly. This is particularly relevant when the previous setup file ("STX~.INI") remains and is later detected by ETERNUSmgr during operation.

Appendix A How to Set Up the Web Server

In addition to installing ETERNUSmgr, your Web server may need to be appropriately set up to enable faults to be monitored and the device status displayed using a Web browser.
This appendix introduces an example of how to install ETERNUSmgr and how to set up apache, a typical Web server.

The following describes an example of "apache 1.3.20" as the Web server. The directory configuration to be installed, setup method, and name or content of setup file sometimes vary according to differences between apache versions and the version of the OS. If the settings of the apache you are using are not as shown in this example, rewrite the relevant items.

ETERNUSmgr is not dependent on Web server type. However, the Web server should have the capability to display an appropriate directory list for an HTML format log file list. Also, ETERNUSmgr does not recommend or guarantee use of apache as the Web server.
For details on how to install the Web server or the setup method, refer to the relevant documents (User's Manual of the Web server you are using, etc.).

Example 1

Setting up the ETERNUSmgr Top Menu directory as the Web server top public directory (root) when installing ETERNUSmgr using the default settings.

[Assumptions]

- apache is already installed under the following directory configuration

Root path for apache HTML document	: "/home/httpd/html"
Full path of apache setup file	: "/etc/httpd/conf/httpd.conf"

- ETERNUSmgr is installed under the following settings

Directory of top menu	: "/opt/FJSVgrmgr/www"
Directory of top menu	: "http://(Web server name. domain name)/"

[Web server setup procedure]

Procedure

1 Open the apache setup file "httpd.conf" in an editor (e.g. vi).

2 Search for the line described as "DocumentRoot" in "httpd.conf."
(example of "httpd.conf")

```
#
# DocumentRoot: The directory out of which you will serve your
# documents. By default, all requests are taken from this directory, but
# symbolic links and aliases may be used to point to other locations.
#
DocumentRoot "/home/httpd/html"
```

3 Correct the path set in "DocumentRoot" to the directory of the ETERNUSmgr Top Menu.
(Change underlined section below.)
(example of "httpd.conf")

```
#
# DocumentRoot: The directory out of which you will serve your
# documents. By default, all requests are taken from this directory, but
# symbolic links and aliases may be used to point to other locations.
#
DocumentRoot "/opt/FJSVgrmgr/www"
```

4 Add the directory option setting (setting to display the directory list).

```
<Directory "/opt/FJSVgrmgr/www">
   DirectoryIndex index.htm
   Options Indexes MultiViews
   AllowOverride None
   Order allow,deny
   Allow from all
</Directory>
```

5 Reboot apache.

End of procedure

Example 2

Setting up the ETERNUSmgr Top Menu directory as a Web server public directory ("/ETERNUSmgr") when installing ETERNUSmgr using the default settings.

[Assumptions]

- apache is already installed under the following directory configuration

Root path for apache HTML document	: "/home/httpd/html"
Full path of apache setup file	: "/etc/httpd/conf/httpd.conf"

- ETERNUSmgr is installed under the following settings

Directory of top menu	: "/opt/FJSVgrmgr/www"
URL for above directory	: "http://(Web server name. domain name)/ETERNUSmgr"

[Web server setup procedure]

Procedure

1 Open the apache setup file "httpd.conf" in an editor (e.g. vi).

2 Search for the line described as "Alias" in "httpd.conf."
(example of "httpd.conf")

```
#
# Note that if you include a trailing / on fakename then the server will
# require it to be present in the URL.  So "/icons" isn't aliased in
this
# example, only "/icons/"..
#
Alias /icons/ "/home/httpd/icons/"
<Directory "/home/httpd/icons">
   Options Indexes MultiViews
   AllowOverride None
   Order allow,deny
   Allow from all
</Directory>
```

3 Add the directory of the ETERNUSmgr Top Menu to the apache Alias. (Add underlined section below.)
(example of "httpd.conf")

```
#
# Note that if you include a trailing / on fakename then the server will
# require it to be present in the URL.  So "/icons" isn't aliased in
this
# example, only "/icons/"..
#
Alias /icons/ "/home/httpd/icons/"
<Directory "/home/httpd/icons">
Options Indexes MultiViews
AllowOverride None
Order allow,deny
Allow from all
</Directory>

Alias /ETERNUSmgr/ "/opt/FJSVgrmgr/www/"
<Directory "/opt/FJSVgrmgr/www">
   Options Indexes MultiViews
   AllowOverride None
   Order allow,deny
   Allow from all
</Directory>
```

4 Reboot apache.

End of procedure

Example 3

Setting up the ETERNUSmgr Top Menu in the previously used Web server public directory when installing ETERNUSmgr.

[Assumptions]

- apache is already installed under the following directory configuration

Root path for apache HTML document	: "/home/httpd/html"
Full path of apache setup file	: "/etc/httpd/conf/httpd.conf"

- ETERNUSmgr is installed under the following settings

Directory of top menu	: "/home/httpd/html/ETERNUSmgr"
URL for above directory	: "http://(Web server name. domain name)/ ETERNUSmgr"

[Web server setup procedure]

> **Note**
>
> When the directory of the ETERNUSmgr Top Menu is created under the root path of the apache HTML document, and the name of the URL directory matches the name of the directory under the root path, measures such as changing the setup on apache or restarting the Web server are not required.

In Example 1 and Example 2 introduced above, the Web server needs to be rebooted.
For example, when apache is set to automatically restart after the OS is rebooted, and the startup shell script is "/etc/init.d/httpd," apache can be restarted by the following method:

```
/etc/init.d/httpd restart
```

For details, refer to the relevant materials for the Web server you are using.

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